

***Remarks***

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 18-67 are pending in the application. Claims 18-45 have been withdrawn from further consideration in accordance with Applicants' election submitted on July 29, 2002 (Paper No. 7). Of those remaining, claims 46, 66 and 67 are independent. Claims 46-67 are sought to be amended by this paper. The amendments are supported by the specification and are believed to introduce no new matter. Entry of the amendments is, therefore, respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider and withdraw all outstanding rejections.

***Description of the Invention***

The present invention relates to a novel aircraft cabin seating unit. The seating unit comprises a fixed housing which houses or contains a primary seat. The primary seat has a reclinable back, a seating portion, a leg rest and reclining mechanism. The seating portion is arranged to move with the reclinable back to allow the reclinable back to move between an upright position and a substantially horizontal position. When the reclinable back is moved to the substantially horizontal position, the seating portion cooperates with the reclinable back to form a substantially flat surface. The leg rest is arranged to cooperate with the seating portion to form another part of the substantially

flat surface when the reclinable back is moved to the substantially horizontal position.

When the reclinable back is moved to the substantially horizontal position to form a substantially flat surface, in cooperation with the seating portion and leg rest of the primary seat, the fixed housing of the aircraft cabin seating unit advantageously houses and surrounds the primary seat to afford the user a sense of privacy while resting or sleeping without impinging on the usable space of a nearby passenger, particularly, a passenger seated immediately behind the user of the aircraft cabin seating unit of the present invention.

***Rejections under 35 U.S.C. § 102***

The Examiner has rejected claims 46 and 66 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,402,544 to Crawford *et al.* (the Crawford patent). The Crawford patent discloses a combined chair and gurney for use by patients in hospitals, nursing homes and other healthcare facilities that can be easily converted from a chair to a gurney. The combined chair and gurney comprises an outer base support frame (12) and an inner movable frame (14). The inner movable frame (14), having linkages (72,74), supports three hinged segments which define a rear back support segment (48), an intermediate seat support segment (52) and a front leg support segment (54). When configured as a gurney, hinged segments (48,52,54) are moved to an uppermost position to form a flat surface for supporting a patient in the supine position, as shown in Figures 2 and 3. When configured as a chair, hinged segments (48,52,54) are moved to a lowermost position to form a reclined seat for the patient having back, seat and leg

support sections. *See* Figures 3 and 4. The invention of the Crawford patent can be moved from the chair position to the gurney position by an electric motor (148).

The Examiner has taken the position that the Crawford patent teaches the conventional use of a seat (52) and reclinable back (48) within a fixed housing, and a leg support (54) that can be driven between a retracted position and a supporting position by a trolley (72,107) and electric motor (148). Applicants respectfully disagree with the Examiner's position in view of the following arguments.

Claim 46, as hereby amended, recites an aircraft seating unit comprising a fixed housing which contains a primary seat. The primary seat comprises a reclinable back, a seating portion, a leg rest and driving means. The reclinable back is arranged to recline in such a manner that it remains substantially within the housing of the aircraft cabin seating unit. The seating portion is connected to the reclinable back and arranged to move forward with the reclinable back to allow the back to be reclined continuously between a substantially upright position and a substantially horizontal position. The leg rest is connected to the seating portion and arranged to move between a retracted position and an extended position. The reclinable back, seating portion and leg rest are arranged to cooperate to form a substantially flat surface when the back is in the substantially horizontal position and the leg rest is in the extended position.

Applicants submit that the aircraft cabin seating unit recited in claim 46 is not anticipated by the disclosure of the Crawford patent. The cited patent teaches a

- combined chair and gurney that clearly differs from an aircraft cabin seating unit. As compared structurally to the limitations of claim 46, the Crawford patent fails to disclose a fixed housing containing a primary seat having a reclinable back arranged to recline in such a manner that it remains substantially within the fixed housing. Instead of fixed a housing, the Crawford patent discloses, at most, an outermost support frame (12) having opposed vertical side frames and a plurality of lower cross members which support the other components of the combined chair and gurney, but provides no housing for the chair of the Crawford patent, as claimed. Even if outermost support frame (12) satisfied the fixed housing limitation of claim 46 (and Applicants assert that it does not), Applicants submit that rear support segment (48) fails to remain substantially within the outermost support frame when a user moves the rear support segment to the reclined uppermost (or gurney) position, as required by claim 46. If, *arguendo*, outermost support frame (12) and rear bracket (32) represent the claimed fixed housing, and rear support segment (48) represents the reclinable back of the primary seat, rear support segment (48) clearly extends *beyond and outside* of the bounds of the outermost support frame and rear bracket by an appreciable distance when moved to the uppermost (reclined) gurney position shown in Figures 2 and 3. Indeed, if the structure of the Crawford patent were employed in an aircraft cabin, reclining of the rear or back support segment would produce an effect precisely opposite to that which the present invention seeks to avoid (*i.e.*, impinging on the space of another passenger seated to the rear). Because the Crawford patent fails to disclose an aircraft cabin seating unit having a fixed housing and a primary seat having a reclinable back which remains substantially within the fixed housing when reclined, Applicants submit that claim 46 is patentable over the Crawford

- patent under Section 102(e). Reconsideration and withdrawal of the rejection is therefore respectfully requested.

Similar to claim 46, claim 66 recites an aircraft cabin seating unit comprising a fixed housing which contains a primary seat. The primary seat comprises, *inter alia*, a reclinable back, a seating portion, a leg rest and a reclining mechanism. Like claim 46, the reclinable back of the primary seat is arranged to recline in such a manner that it remains within the fixed housing of the aircraft cabin seating unit. Applicants submit that the Crawford patent fails to anticipate the invention of claim 66 for the same reason that it fails to anticipate the invention of claim 46. Specifically, the Crawford patent fails to disclose an *aircraft cabin seating unit* comprising a *fixed housing* and primary seat having a reclinable back which remains *substantially within the fixed housing when reclined*. In view of the lack of an anticipatory teaching, Applicants submit that claim 66 is also patentable under Section 102(e). Reconsideration and withdrawal of the rejection with respect to claim 66 is, therefore, respectfully requested.

### ***Rejections under 35 U.S.C. § 103***

The Examiner has rejected claims 46-51, 66 and 67 under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 4,018,166 to Gutridge *et al.* (the Gutridge patent) in view of the Crawford patent. The limitations of claims 46 and 66 are discussed above. Claim 67 is similar to claims 46 and 66, but also includes limitations to a back runner, a seating runner and an electric motor drive mechanism for reclining the seat.

The Gutridge patent discloses a seating arrangement for a passenger compartment (10) of a railway carriage. The arrangement comprises opposing seat and berth combinations (23) which can be converted from upright seats to elongated berths by moving the seats of the opposing combinations toward each other. Each seat and berth combination (23) comprises a pair of seats (24) connected to seat backs (25) by a hinged bracket and pin (33,35). Seat back (25) is fitted with rollers (30) received within tracks (26) which guide the seat back from an upright position to a horizontal position. When opposing seat and berth combinations (23) have been positioned in the horizontal position, opposed seats (24) and seat backs (25) form a sleeping surface or berth for the occupant.

The Examiner has taken the position that the Crawford patent discloses use of a conventional leg support and drive means, and that it would have been obvious to one of ordinary skill in the art to modify the seating arrangement of the Gutridge patent with the leg support and drive means of the Crawford patent to provide easier adjustment of the seating arrangement and to increase the sleeping surface provided by the reclined opposing seat and berth combinations. Applicants submit that claims 46, 66 and 67 (the independent claims of the rejected claims) recite patentable subject matter.

Applicants first submit that the Examiner has used impermissible hindsight reconstruction to combine seating components from outside the field of aircraft seating to deprecate the claimed aircraft cabin seating units. However, one of ordinary skill in the relevant art (*i.e.*, aircraft seating) would not have been motivated to combine or even

- consider the teachings of the Gutridge or Crawford patent, as neither patent teaches a seat for an aircraft cabin. As the Examiner can surely appreciate, aircraft cabin seating units are subject to regulatory safety requirements, which simply do not apply to other types of seats (particularly, railway car seats, wheeled chairs or gurneys). As such, one of ordinary skill in the art would not look to the Gutridge or Crawford patent, as neither discloses a seat or support which could serve as a *realistic* starting point for the development of an aircraft cabin seating unit. In this connection, the Examiner will appreciate that one skilled in the art would not consider the seating arrangement taught by the Gutridge patent in the context of designing an aircraft cabin seating unit since the seat structure requires that some of the tracks on which the seat parts move are fixed to walls which are part of the railway carriages. *See* tracks (26,37) secured to outer wall (11), partition wall (12) and divider wall (14) of the Gutridge patent. Aircraft are designed to have seats fitted to the cabin floor. Securing any structurally important part of a seat, as opposed to a trim part, to the walls of the aircraft would give rise to serious structural considerations and may well call for reinforcement of the aircraft structure in order to meet the regulatory requirements such as, for example, the load withstand during take-off and landing. Similarly, the combined chair and gurney of the Crawford patent is a mobile structure of relatively lightweight design, which simply does not suggest a seating unit that could be secured to an aircraft to provide the load withstand and protection required by aircraft seat regulations. The Examiner must also appreciate that leg rest (54) of the Crawford patent remains extended at all times, regardless of use as a chair or gurney. *See* Figures 2 and 4 of the Crawford patent. Such a structure is unsuitable for an aircraft cabin environment, in which retraction of the leg rest is required

- in order to permit rapid mobility for passengers during embarkation and in emergency situations. The structure taught by the Crawford patent clearly fails to meet this requirement. Put another way, it simply does not matter if the modified seat and berth combination suggested by the Examiner could be used in an aircraft. Of relevance with respect to Section 103 is that the skilled artisan would not even consider looking to the Gutridge or Crawford patent, since neither discloses an aircraft cabin seating unit or seat having any practical utility or applicability to the art of *aircraft* seating.

Even if one skilled in the art would have considered the Gutridge or Crawford patent, he or she would not have been motivated to add a leg support to the seat and berth combination of the Gutridge patent *merely* because leg supports have been deemed to be conventional. Indeed, the skilled artisan would not have added the leg support of the Crawford chair and gurney to the seat and berth combination of the Gutridge patent, as no such need exists. As described above, the Gutridge patent discloses an opposing pair of seat and berth combinations (23) which can be moved from an upright position to a horizontal position. When the opposing seat and berth combinations have been moved to the horizontal positions, the seats and seat backs (having a specific length) meet to form a sleeping surface. To add a leg support to one or both of the opposing seat and berth combinations of the Gutridge patent would destroy the utility of the invention, as the distance between the opposing seats in the compartment (10) would not accommodate the extra length, preventing formation of the sleeping surface. Teachings of the prior art cannot be combined where the combination would change or destroy operation of the reference. *See, e.g., In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (C.C.P.A. 1959). Since



- the modification suggested by the Examiner would defeat the utility of the Gutridge patent, Applicants submit that the combination and rejection under Section 103 is not proper and cannot be maintained.

Additionally, Applicants assert that one of ordinary skill in the art would not have been motivated to consider and combine the seat of the Gutridge patent with the chair of and gurney of the Crawford patent, as the same are structurally and functionally different. The railway car seats of the Gutridge patent are moved from an upright position to a flat or reclined position by *downward and forward* movement of the seat backs and seats. To reconfigure the chair of the Crawford patent as a gurney, the seat and leg segment supports must be moved *upwards* (by pivotal links) to bring the segments into alignment with the rear back support of the chair. Since the segments of the Crawford chair and gurney are manipulated by *upward and pivotal* movement, rather than by *downward and forward* movement, Applicants submit that one of ordinary skill in the art would not have been motivated to combine the teachings of the Gutridge patent with the Crawford patent.

Assuming for the sake of argument that the Crawford patent could be properly combined with the Gutridge patent, the combination does not disclose the aircraft cabin seating unit of claims 46, 66 and 67. First, claims 46, 66 and 67 all require that the aircraft cabin seating unit comprise a fixed housing and that the reclinable back of the primary seat is arranged to recline in such a manner that it remains within, or substantially within, the fixed housing. As already discussed above, the outermost

- support frame (12) and rear support segment (48) of the Crawford patent fail to disclose the claimed limitation.

The Examiner must also appreciate that the Gutridge patent does not disclose a fixed housing for a seat structure. In fact, the Gutridge patent does not have any sort of housing, fixed or otherwise. Instead, the seating unit of the Gutridge patent is in part fixed to walls of the railway carriage and those walls clearly do not constitute any sort of fixed housing belonging to the seat. In the absence of a reclinable back housed substantially within a fixed housing when the back is reclined, as claimed, Applicants submit that claims 46, 66 and 67 are patentable.

Second, neither the Gutridge or Crawford patent teaches a leg rest as recited in the independent claims. The Gutridge patent teaches no leg rest at all, and the leg support segment of the Crawford patent does not meet the relevant limitation of claims 46, 66 and 67. More particularly, the leg rest of claims 46, 66 and 67 is required to move between an extended position and a retracted position. However, the leg support segment of the Crawford patent is always extended. *See* Figures 2 and 5 which show the two extreme positions of the leg rest. Indeed, an important feature of the Crawford chair and gurney is that the leg rest permanently extend to support the legs of the user. For this reason, the Crawford patent fails to disclose or suggest a leg rest having a retracted position, as recited in claims 46, 66 and 67.

Having shown that the combination of references under Section 103 is neither proper, nor discloses the inventions recited in claims 46, 66 and 67, Applicants submit that the claims are patentable. Reconsideration and withdrawal of the rejection is therefore respectfully requested.

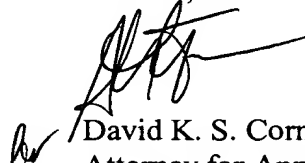
### ***Conclusion***

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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